REMARKS

Response to Objection of Claims 40 and 63

In the February 5, 2002 Office Action, the Office objected to claims 40 and 63 due to a minor informality. Specifically, the Office believes that the term "abstracted" should be replaced with --extracted--. Applicants used the term "abstraction" in the specification (see page 15, first paragraph, last sentence) to define the process of removal of oxygen during the electrode forming step. Applicants have included herewith a copy of the definition of the term "abstracted" from The American Heritage Dictionary (see Appendix C). The term "abstracted" is defined as "removed or separated from something" and this is definition that applicants intended for use of the term in the present specification and claims. According, applicants are requesting that the Office withdraw the objection regarding applicants' choice of terms used in the specification and claims.

Rejection of Claims and Traversal Thereof

In the February 5, 2002 Office Action,

claims 40-55 and 61-63 were rejected under 35 U.S.C. §112, first paragraph; and

claims 40-43, 45-47, 49-55 and 63 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,300,212 I(Inoue, et al.) and

claims 44, 48, 61 and 62 were rejected under 35 U.S.C. §103 as being unpatentable over Inoue, et al. and in further view of U. S. Patent No. 6,020,643 (Fukuzumi, et al).

These rejections are traversed and reconsideration of the patentability of the pending claims is requested in light of the following remarks.

Rejection under 35 U.S.C. § 112, first paragraph

Claims 40-55 and 61-63 were rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

According to the Office, the claim language;

> "implies that the oxygen concentration throughout the ferroelectric oxide or high ε oxide material is completely stoichiometric, which is not supported by the specification, even though the specification supports the subject matter that the ferroelectric oxide or high ε oxide material at the upper surface and the vicinity thereof is substantially stoichiometrically complete in oxygen concentration...."

Applicants have amended claims 40 and 63 to include language directly from the specification that explicitly describes microelectronic devices comprising a ferroelectric oxide or high ε oxide film layer that is stoichiometrically complete in oxygen not only on the top-surface of the ferroelectric oxide or high ε oxide film layer but throughout the ferroelectric oxide or high ε oxide film layer. Specifically, the specification states that one of the objects of the present invention is "to provide a microelectronic device structure including a ferroelectric or high ε film material overlaid with a top electrode structure, wherein the ferroelectric or high ε material is stoichiometrically non-deficient - i.e., is stoichiometrically satisfied - in oxygen content, even at the surface region of the ferroelectric or high ε film material adjacent to the TE layer." (see the bottom of page 4 to the top of page 5 of the instant specification). Further, on page 16, line 22, the specification expressly states that the "oxygen in said ferroelectric oxide or high ε oxide film material is in proper stoichiometric proportion to metal cations therein." Still further, it is stated on page 16, second paragraph, the amount of oxygen is maintained during the earlier portions of the growth process for the PZT material at a level (by appropriate partial pressure, absolute pressure and concentration) that is in the proper stoichiometric amount for $PbZrTiO_3$ formation. Clearly, one skilled in the art reading the above described statements would **know** that the applicants, at the time the application was filed, had possession of the claimed invention.

It should be noted that the Office bears the burden of presenting a *prima facie* case of unpatentability and insofar as the written description requirement is concerned, that burden is discharged only by "presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims." *In re Wertheim*, 191 USPQ 97 (CCPA 1976). Further, if the specification, such as in the present case, contains a description of the claimed invention albeit not *in ibsis verbis*, the Office in order to meet the burden of proof, must provide reasons why one of ordinary

skill in the art would not consider the description sufficient. *In re Alton*, 37 USPQ2d 1578 (Fed. Cir. 1996). The Office has not met this burden. As stated by the Court in *In re Eickmeyer*[1], "[A] statement of appellant's invention [in his specification] which is as broad as appellant's broadest claims is sufficient to meet this requirement." Applicants have met this requirement and request the description rejection be withdrawn.

Rejection under 35 U.S.C. §102(e)

Claims 40-43, 45-47, 49-55 and 63 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,300,212 (Inoue, et al.). Enclosed and submitted herewith is a Declaration under 37 CFR §1.131 executed by the inventors. The Declaration attests to facts showing completion and possession of the claimed invention prior to the effective date of the following reference cited in the February 5, 2002 Office Action against the claims currently pending in the application.

Reference	Effective Date
Inoue, et al.	July 29, 1998 (35 U.S.C. §102(e))

The Declaration includes appended Exhibit 1.

Exhibit 1 is a copy of pages 1-2 of an Invention Disclosure Document, titled "[O]xidizing top electrode deposition process", on which all dates have been blacked out, but which dates, and the date of the document, are prior to the effective date of the Inoue, et al. reference.

The Invention Disclosure Document identifies co-inventors Peter C. Van Buskirk, Steven M. Bilodeau, Stephen T. Johnston, Daniel J. Vestyck, and Michael W. Russell, as writers of the document, and discusses the need for preventing "the ferroelectric or high ε film from becoming oxygen deficient during TE deposition." Page 1 discusses the need for preventing the ferroelectric or high ε film from becoming oxygen deficient during TE deposition. (see last paragraph in Section (1)). Page 2, discusses different methods for preventing oxygen deficiency in the ferroelectric film, including top electrode deposition techniques and PZT deposition techniques as described in the present specification. This statement provides further evidence that applicants envisioned a microelectronic device that comprised a ferroelectric or high ε film that was stoichiometrically satisfied in oxygen content, even at the surface region of the ferroelectric or high ε film material adjacent to the TE layer.

[1] *In re Eickmeyer*, 202 USPQ 655 (CCPA 1979)

Exhibit 1 in addition to the enclosed Declaration shows completion and possession of the instant claimed invention prior to the effective date of the Inoue, et al. reference.

Accordingly, applicants respectfully request the withdrawal of the rejection of claims 40-43, 45-47, 49-55 and 63 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,300,212 I(Inoue, et al.).

Rejection under 35 U.S.C. §103(a)

In the February 5, 2002 Office Action, the only remaining issue included a rejection under 35 U.S.C. §103(a) based on a combination of Inoue, et al. and Fukuzumi, et al. The obviousness rejection relies on Inoue, et al. as the primary reference. As stated above, applicants have filed herewith a Declaration under 37 CFR §1.131 executed by the inventors and attesting to facts showing completion and possession of the presently claimed invention prior to the effective date of the Inoue, et al reference thereby removing the Inoue, et al. as competent prior art.

The Office admits that Inoue, et al. does not expressly disclose that Pt oxide, Rh or Rh oxide can be used for a top electrode. In an attempt to remedy the shortcomings of the Inoue, et al., the Office has cited Fukuzumi, et al. for disclosing a top electrode fabricated of Pt oxide, Rh or Rh oxide. However, Inoue, et al. is no longer competent prior art and the Fukuzumi, et al., reference, either alone or combined with Inoue, et al. does not render applicants' claimed invention *prima facie* obvious.

According to MPEP 706.02(j):

> "To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir 1991)."

The Fukuzumi, et al. reference describes devices and methods of forming such devices comprising a plurality of contact holes at different depths that prevent electrical potential variations of an upper electrode during the contact hole formation step. The reference does not in any way disclose, teach or suggest the presently claimed invention to form a microelectronic device that comprises a ferroelectric or

high ε film that is stoichiometrically satisfied in oxygen content. In light of the above discussion and the fact that the Office has not met its burden of establishing a *prima facie* case of obviousness, applicants request that the rejection of claims 44, 48, 61 and 62 on the basis of obviousness, be withdrawn.

CONCLUSION

Applicants have satisfied the requirements for patentability. All pending claims are free of the art and fully comply with the requirements of 35 U.S.C. §112. It therefore is requested that Examiner Hu reconsider the patentability of claims 40-55 and 61-63, in light of the distinguishing remarks herein, and withdraw all rejections, thereby placing the application in condition for allowance. Notice of the same is earnestly solicited. In the event that any issues remain, Examiner Hu is requested to contact the undersigned attorney at (919) 419-9350 to resolve same.

Respectfully submitted,

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Appendix A –Version with Markings to Show Changes Made

40. (Twice amended) A microelectronic device structure including a top electrode layer on a top surface of a ferroelectric oxide or high ε oxide film material, wherein said ferroelectric oxide or high ε oxide film material is stoichiometrically satisfied in oxygen content, [stoichiometrically complete in oxygen content throughout,] including the top surface region of the ferroelectric oxide or high ε oxide film material, and wherein the top electrode layer does not contain oxygen abstracted from the thin film of ferroelectric or high ε material underneath.

63. (Amended) A ferroelectric or high ε capacitor comprising:

a bottom electrode layer formed of a material selected from the group consisting of Ir, Ir oxide, Rh, Rh oxides, and compatible mixtures and alloys thereof;

a thin film of a ferroelectric or high ε material over the bottom electrode, wherein the material is stoichiometrically satisfied in oxygen content, [stoichiometrically satisfied in oxygen content throughout,] including the surface region of the material adjacent to the top electrode layer;

a top electrode layer on the thin film of ferroelectric or high ε material, which is formed of a material selected from the group consisting of Ir, Ir oxide, Rh, Rh oxides and compatible mixtures and alloys thereof, wherein the top electrode layer does not contain oxygen content abstracted from the thin film of ferroelectric or high ε material underneath.

Appendix B – All Pending Claims

40. (Twice amended) A microelectronic device structure including a top electrode layer on a top surface of a ferroelectric oxide or high ε oxide film material, wherein said ferroelectric oxide or high ε oxide film material is stoichiometrically satisfied in oxygen content, including the top surface region of the ferroelectric oxide or high ε oxide film material, and wherein the top electrode layer does not contain oxygen abstracted from the thin film of ferroelectric or high ε material underneath.

41. A microelectronic device structure according to claim 40, wherein said ferroelectric or high ε film comprises an oxide perovskite or layered structure perovskite.

42. A microelectronic device structure according to claim 40, wherein said ferroelectric or high ε film comprises a material selected from the group consisting of lead zirconium titanate, barium and/or strontium titanates, and strontium bismuth tantalates.

43. A microelectronic device structure according to claim 40, wherein said ferroelectric or high ε film comprises a lead zirconium titanate material.

44. A microelectronic device structure according to claim 40, wherein said ferroelectric or high ε film comprises a barium and/or strontium titanate material.

45. A microelectronic device structure according to claim 40, wherein said ferroelectric or high ε film comprises a strontium bismuth tantalate material.

46. A microelectronic device structure according to claim 40, wherein said top electrode layer comprises a material selected from Pt, Pt oxides, Ir, Ir oxides, Pd, Pd oxides, Rh, Rh oxides, and compatible mixtures and alloys of the foregoing.

47. A microelectronic device structure according to claim 40, wherein said top electrode layer comprises a Pt material.

48. A microelectronic device structure according to claim 40, wherein said top electrode layer comprises a Pt oxide material.

49. A microelectronic device structure according to claim 40, wherein said top electrode layer is formed of Ir.

50. A microelectronic device structure according to claim 40, wherein said top electrode layer comprises an Ir oxide material.

51. A microelectronic device structure according to claim 40, wherein the top electrode layer is formed of Ir or IrO_2.

52. A microelectronic device structure according to claim 40, wherein the top electrode is formed in an oxygen-enriched environment.

53. A microelectronic device structure according to claim 40, wherein said top electrode is formed of a metallic non-oxide material by sputtering in the presence of oxygen.

54. A microelectronic device structure according to claim 40, wherein said top electrode is formed of a noble metal that is formed by evaporation of a noble metal source material in the presence of oxygen.

55. A microelectronic device structure according to claim 40, wherein the top electrode layer is formed of a noble metal by a chemical vapor deposition process that incorporates oxygen.

61. A microelectronic device structure according to claim 40, wherein said top electrode layer comprises Rh.

62. A microelectronic device structure according to claim 40, wherein said top electrode layer comprises a Rh oxide material.

63. (Amended) A ferroelectric or high ε capacitor comprising:

a bottom electrode layer formed of a material selected from the group consisting of Ir, Ir oxide, Rh, Rh oxides, and compatible mixtures and alloys thereof;

a thin film of a ferroelectric or high ε material over the bottom electrode, wherein the material is stoichiometrically satisfied in oxygen content, including the surface region of the material adjacent to the top electrode layer;

a top electrode layer on the thin film of ferroelectric or high ε material, which is formed of a material selected from the group consisting of Ir, Ir oxide, Rh, Rh oxides and compatible mixtures and alloys thereof, wherein the top electrode layer does not contain oxygen content abstracted from the thin film of ferroelectric or high ε material underneath.

APPENDIX C

THE AMERICAN HERITAGE

I ONARY

OF THE ENGLISH LANGUAGE

WILLIAM MORRIS, Editor

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-tēmus, from *tēmētum*†, liquor, mead, wine.] —**ab·ste′mi·ous·ly** *adv.* —**ab·ste′mi·ous·ness** *n.*

ab·sten·tion (ăb-stĕn′shən) *n.* The act or habit of abstaining. [Late Latin *abstentiō*, from Latin *abstinēre*, ABSTAIN.]

ab·sti·nence (ăb′stə-nəns) *n.* **1. a.** Denial of the appetites; abstention. **b.** Abstention from alcoholic beverages. **2.** *Roman Catholic Church.* Abstention from specified foods on days of penitential observance. [Middle English, from Old French, from Latin *abstinentia*, from *abstinēns*, present participle of *abstinēre*, ABSTAIN.] —**ab′sti·nent** *adj.* —**ab′sti·nent·ly** *adv.*

Synonyms: *abstinence, self-denial, temperance, sobriety, continence.* These nouns express restraint of one's appetites or desires. *Abstinence* implies the willful avoidance of pleasures, especially of food and drink, thought to be harmful. *Self-denial* suggests resisting one's desires for some higher, moral goal. *Temperance* and *sobriety* both stress avoidance of alcohol, but *temperance* is more often associated with the mere curtailment of drinking, while *sobriety* additionally suggests conservative action or manner. *Continence* specifically refers to restraint of sexual activity.

ab·stract (ăb-străkt′, ăb′străkt′) *adj. Abbr.* **abs., abstr.** **1.** Considered apart from concrete existence or a specification thereof. **2.** Theoretical; not applied or practical. **3.** Not easily understood; abstruse. **4.** Thought of or stated without reference to a specific instance. **5.** Designating a genre of painting whose intellectual and affective content depends solely on intrinsic form. —*n.* (ăb′străkt′). *Abbr.* **abs., abstr.** **1.** A statement summarizing the important points of a given text. **2.** The concentrated essence of a larger whole. **3.** Something abstract, as a term. **—in the abstract.** Apart from actual substance or experience. —*tr.v.* (ăb-străkt′ *for senses 1, 2, 3;* ăb′străkt′ *for sense 4*) **ab·stracted, -stracting, -stracts.** **1.** To take away; remove. **2.** To remove without permission; filch. **3.** To consider theoretically; think of (a quality or attribute) without reference to a particular example or object. **4.** To summarize. [Middle English, from Latin *abstractus*, "removed from (concrete reality)," past participle of *abstrahere*, to pull away, remove : *abs-*, *ab-*, away from + *trahere*, to pull (see **tragh-** in Appendix*).] —**ab·stract′er** *n.* —**ab·stract′ly** *adv.* —**ab·stract′ness** *n.*

ab·stract·ed (ăb-străk′tĭd) *adj.* **1.** Removed or separated from something; apart. **2.** Lost or deep in thought; preoccupied; meditative. —See Synonyms at **forgetful.** —**ab·stract′ed·ly** *adv.* —**ab·stract′ed·ness** *n.*

Synonyms: *abstracted, absorbed, distraught, absent-minded.* These adjectives apply to absence of normal awareness of one's surroundings. *Abstracted* implies being so deep in thought as to be mentally elsewhere. *Absorbed* implies complete and pleasureable mental involvement in the object of thought. *Distraught* implies mental anxiety that makes concentration extremely difficult. *Absent-minded* suggests the making of trivial errors because the mind is straying from the matter at hand.

abstract expressionism. A school of painting that flourished after World War II until the early 1960's, characterized by its emancipation from traditional brushwork in freely developing shape and design and by its exclusion of representational content.

ab·strac·tion (ăb-străk′shən) *n.* **1.** The act or process of removing or separating. **2. a.** The act or process of separating the inherent qualities or properties of something from the actual physical object or concept to which they belong. **b.** A product of this process; a general idea or word representing a physical concept. **3.** Preoccupation. **4.** An abstract work of art.

ab·strac·tion·ism (ăb-străk′shən-ĭz′əm) *n.* The theory and practice of abstract art. —**ab·strac′tion·ist** *n. & adj.*

ab·strac·tive (ăb-străk′tĭv) *adj.* Of or derived by abstraction.

ab·struse (ăb-strōōs′) *adj.* Difficult to understand; recondite. See Synonyms at **ambiguous, mysterious.** [Latin *abstrūsus*, past participle of *abstrūdere*, to hide : *abs-*, *ab-*, away + *trūdere*, to push (see **treud-** in Appendix*).] —**ab·struse′ly** *adv.* —**ab·struse′ness** *n.*

ab·surd (ăb-sûrd′, -zûrd′) *adj.* Ridiculously incongruous or unreasonable. See Synonyms at **foolish.** [French *absurde*, from Latin *absurdus*. See **swer-**² in Appendix.*] —**ab·surd′i·ty, ab·surd′ness** *n.* —**ab·surd′ly** *adv.*

abt. about.

A·bu Dha·by (ä′bə dä′bə). Also **A·bu Dha·bi.** The capital of the United Arab Emirates. Population, 22,000.

a·bu·li·a (ə-bōō′lē-ə) *n.* Also **a·bou·li·a.** *Psychiatry.* Loss or impairment of the ability to decide or act independently. [New Latin, from Greek *aboulia*, irresolution : *a-*, without + *boulē*, will (see **gwel-**¹ in Appendix*).] —**a·bu′lic** *adj.*

A·bu·na (ä-bōō′nä). A river rising in northeastern Bolivia and flowing 200 miles northeast to the Madeira in Brazil.

a·bun·dance (ə-bŭn′dəns) *n.* Also **a·bun·dan·cy** (-dən-sē). **1.** A great quantity; plentiful amount. **2.** Fullness to overflowing: *"My thoughts . . . are from the abundance of my heart."* (De Quincey). **3.** Affluence; wealth.

a·bun·dant (ə-bŭn′dənt) *adj.* **1.** In plentiful supply; more than sufficient; ample. **2.** Abounding with; rich. Used with *in.* [Middle English *abundaunt*, from Old French *abundant*, from Latin *abundāns*, present participle of *abundāre*, ABOUND.] —**a·bun′dant·ly** *adv.*

a·buse (ə-byōōz′) *tr.v.* **abused, abusing, abuses.** **1.** To use wrongly or improperly; misuse. **2.** To hurt or injure by maltreatment. **3.** To assail with contemptuous, coarse, or insulting words; revile. —*n.* (ə-byōōs′). **1.** Misuse. **2.** A corrupt practice or custom. **3.** Maltreatment. **4.** Insulting or coarse language. [Middle English *abusen*, from Old French *abuser*, from *abus*, improper use, from Latin *abūsus*, a using up, past participle of *abūtī*, to use up, make (improper) use of : *ab-*, away + *ūtī*, to USE.] —**a·bus′er** *n.*

Synonyms: *abuse, misuse, mistreat, ill-treat, maltreat.* These verbs mean to treat a person or thing wrongfully or harmfully. *Abuse* applies to wrongful or unreasonable treatment by deed or word. *Misuse* stresses incorrect or unknowledgeable handling; it implies but does not emphasize harm. *Mistreat, ill-treat,* and *maltreat* all have the sense of inflicting injury, usually physical and often with intent to do harm. *Mistreat* may imply only negligence or lack of knowledge on the offender's part, but more often refers to harm inflicted deliberately. *Ill-treat* more specifically applies to harmful treatment of persons or animals. *Maltreat* implies rough handling.

A·bu Sim·bel (ä′bōō sĭm′bəl). A village in the Aswan area of southern Egypt; site of a group of ancient Egyptian rock temples built by Rameses II.

a·bu·sive (ə-byōō′sĭv, -zĭv) *adj.* **1.** Of, pertaining to, or characterized by abuse. **2.** Wrongly or incorrectly used or treated. **3.** Serving for abuse; insulting; reviling. —**a·bu′sive·ly** *adv.*

a·but (ə-bŭt′) *v.* **abutted, abutting, abuts.** —*intr.* To touch at one end or side of something; lie adjacent. Used with *on, upon,* or *against.* —*tr.* To border upon; be next to. [Middle English *abutten*, from Old French *abuter*, to buttress, put an end to : *a-*, to + *buter*, to strike, finish, from Common Romance *bottāre* (unattested) (see **bheu-** in Appendix*).] —**a·but′ter** *n.*

a·bu·ti·lon (ə-byōō′tə-lŏn′) *n.* Any of various shrubs or plants of the genus *Abutilon;* especially, the **flowering maple** *(see).* [New Latin, from Arabic *aubūṭīlūn.*]

a·but·ment (ə-bŭt′mənt) *n.* **1.** The act or process of abutting. **2. a.** Something that abuts. **b.** That on which something abuts. **c.** The point of contact of two abutting objects or parts. **3.** *Architecture.* That element which shares a common boundary or surface with its neighbor. **4.** *Engineering.* **a.** A structure that supports the end of a bridge. **b.** A structure that anchors the cables of a suspension bridge.

a·but·tal (ə-bŭt′l) *n.* **1.** An abutment. **2.** *Plural.* The parts, especially of a piece of land, that abut against other property; boundaries.

ab·volt (ăb-vōlt′) *n. Abbr.* **abv.** A centimeter-gram-second electromagnetic unit of potential difference, equal to the potential difference between two points such that one erg of work must be performed to move a one-abcoulomb charge from one of the points to the other. It is equal to one hundred-millionth (10^{-8}) of a volt. [AB- (absolute) + VOLT.]

a·bysm (ə-bĭz′əm) *n.* An abyss. [Middle English *abi(s)me*, from Old French, irregularly from Late Latin *abyssus*, ABYSS.]

a·bys·mal (ə-bĭz′məl) *adj.* **1.** Unfathomable; extreme. **2.** Of or resembling an abyss. —**a·bys′mal·ly** *adv.*

a·byss (ə-bĭs′) *n.* **1. a.** The primeval chaos. **b.** The bottomless pit; hell. **2.** An unfathomable chasm; a yawning gulf. **3.** Any immeasurably profound depth or void: *"lost in the vast abysses of space and time"* (Loren Eiseley). [Late Latin *abyssus*, from Greek *abussos (limnē)*, "bottomless (lake)" : *a-*, not + *bussos*, bottom (see **gwadh-** in Appendix*).]

a·byss·al (ə-bĭs′əl) *adj.* **1.** Abysmal. **2.** Of or pertaining to the great depths of the oceans.

Ab·ys·sin·i·a. The former name for **Ethiopia.** [New Latin, from Arabic *Habashah*, from *Habash*, Abyssinians.]

Ab·ys·sin·i·an (ăb′ə-sĭn′ē-ən) *adj.* Of or pertaining to Ethiopia or its inhabitants. —*n.* An inhabitant of Ethiopia.

Abyssinian cat. A short-haired cat of a breed developed from Near Eastern stocks, having a reddish-brown coat tipped with small black markings.

ac alternating current.

Ac The symbol for the element actinium.

a.c. *Medicine.* before meals (New Latin *ante cibum*).

A.C. **1.** Air Corps. **2.** alternating current. **3.** athletic club. **4.** before Christ (New Latin *ante Christum*).

a/c, A/C account; account current.

a·ca·cia (ə-kā′shə) *n.* **1.** Any of various chiefly tropical trees of the genus *Acacia*, having compound leaves and tight clusters of small yellow or white flowers. Some species yield gums having a wide variety of uses. **2.** Loosely, any of several related trees, such as the locust. **3.** A substance, **gum arabic** *(see).* [Latin, from Greek *akakia*, probably from Egyptian.]

acad. academic; academy.

ac·a·deme (ăk′ə-dēm′) *n.* **1.** *Sometimes capital* **A.** The world of scholarship and higher education; the scholastic life or environment. **2.** A scholar, teacher, or pedant. **—the groves of Academe.** **1.** A college or university. **2.** Academic life. [Pseudo-Greek form of Greek *Akadēmia*, ACADEMY.]

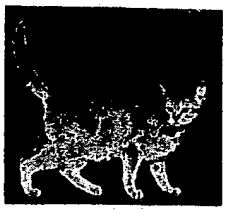
ac·a·de·mi·a (ăk′ə-dē′mē-ə) *n.* The academic world; academe. [New Latin, from Latin *Acadēmia*, ACADEMY.]

ac·a·dem·ic (ăk′ə-dĕm′ĭk) *adj. Abbr.* **acad.** **1.** Of, pertaining to, or characteristic of a school. **2.** Relating to studies that are liberal or classical rather than technical or vocational. **3.** Pertaining or belonging to a scholarly society or organization. **4.** Scholarly to the point of being unaware of the outside world. **5.** Based on formal education. **6.** Formalistic; conventional. **7.** Theoretical; speculative: *"I took an academic interest in the thought of stealing the car"* (John Knowles). —*n.* A student or teacher. —**ac′a·dem′i·cal·ly** *adv.*

ac·a·dem·i·cals (ăk′ə-dĕm′ĭ-kəlz) *pl.n.* The cap and gown traditionally worn at academic ceremonies.

academic freedom. Liberty to pursue and teach relevant knowledge and to discuss it freely without restriction from school or public officials or from other sources of influence.

ac·a·de·mi·cian (ăk′ə-də-mĭsh′ən) *n. Abbr.* **A.** A member of an art, literary, or scientific academy or society.



Abyssinian cat

acacia
Acacia baileyana
Branch showing leaves and flower heads

ac·a·dem·i·cism (ăk′ə-dĕm′
(ə-kăd′ə-mĭz′əm): Tradition
flected in art.

a·cad·e·my (ə-kăd′ə-mē) *n.*,
association of scholars. **2.**
3. A secondary or college-pr
vate one. [From ACADEMY

A·cad·e·my (ə-kăd′ə-mē) *n.*
or artists. **2.** Platonism. **3**
Acadēmia, from Greek *Aka*
losophy, from *Akadēmia*, *A*
Athens where Plato taught,
hero.] —**Ac′a·dem′ic** *n. & a*

A·ca·di·a (ə-kā′dē-ə). **1.** A fo
eastern Canada, that includ
wick. **2.** A parish in south
exiles.

A·ca·di·an (ə-kā′dē-ən) *adj.*
inhabitants. —*n.* One of th
scendants. See **Cajun.**

A·ca·di·a National Park (ə-k
44 square miles in area, on M
ern coast of Maine.

a·ca·jou (ä-kä-zhōō′) *n.* Mah
Portuguese *(a)caju*, from Tu
fusion with Tupi *agapú.*]

acantho-, acanth-. Indica
cephalid. [New Latin, from
ākanthα, thorn. See **ak-** in A

a·can·tho·ceph·a·lid (ə-kăn
ceph·a·lan (-lən). Any of
phylum Acanthocephala, h
hooked spines. [From Ne
heads" (from the spiky pr
neuter plural of *-cephalus*, -c

a·can·thoid (ə-kăn′thoid′) *a*
[ACANTH(O)- + -OID.]

ac·an·thop·ter·yg·i·an (ăk′ă
the superorder Acanthopter
spiny fins, such as bass, pe
Acanthopterygii : ACANTHO-
pterux, wing, fin, from *ptera*
pendix*).] —**ac′an·thop′ter·y**

a·can·thus (ə-kăn′thəs) *n., pl.*
various plants of the genus
ranean region, having larg
2. An architectural ornamen
acanthus, used especially or
[New Latin, from Greek *aka*
thorn. See **ak-** in Appendix.*

a cap·pel·la (ä kə-pĕl′ə).
ment. [Italian, "in the man

a ca·pric·cio (ä kä-prēt′chō,
with whatever expression th
Used as a direction. [Italia

A·ca·pul·co (ä′kə-pōōl′kō).
on the Pacific coast of Mex

ac·a·ri·a·sis (ăk′ə-rī′ə-sĭs) *n*
Latin : ACAR(ID) + -IASIS.]

a·car·i·cide (ə-kăr′ə-sīd′) *n.*
mites; miticide. [ACARI(D) -

ac·a·rid (ăk′ə-rĭd) *n.* Any ar
includes the mites and tic
(family), from *Acarus* (genu
mite.] —**ac′a·rid** *adj.*

acaroid resin. A yellow or r
Australian grass trees, and u
manufacture of paper. Also
New Latin *acaroides*, from G
bred in wax or resin. See **ac**

a·car·pous (ā-kär′pəs) *adj.* *[*
[A- (not) + -CARPOUS.]

ac·a·rus (ăk′ə-rəs) *n., pl.* **-ri** (
genus *Acarus*. [New Latin

a·cat·a·lec·tic (ā′kăt′ə-lĕk′tĭk
having the required number
An acatalectic line. [Late
akatalēktikos : *a-*, not + *ka*

a·cau·date (ā-kô′dāt′) *adj.*
Having no tail. [A- (not) +

ac·au·les·cent (ăk′ô-lĕs′ənt)
so. [A- (not) + CAULESCEN

ACC **1.** Airport code for Ac
Committee.

acc. **1.** acceleration. **2.** acco
4. accusative.

Ac·cad. See **Akkad.**

ac·cede (ăk-sēd′) *intr.v.* **-ce**
one's assent; to consent; agre
come into an office or digni
party to an agreement or trea
at assent. [Middle English
near, agree : *ad-*, to + *cēdere*
—**ac·ced′ence** (-sēd′əns) *n.*

ac·cel·er·an·do (ă-chĕl′ə-rän
crating or quickening in tim
from Latin *accelerandum*, ge
—**ac·cel′er·an′do** *adv.*

ac·cel·er·ate (ăk-sĕl′ə-rāt′) *v*